

## IntelliLite NT MRS19 Quick Start Guide

▶ This guide was created to provide instruction on some of the most common tasks involved when working with the IL-NT-MRS19. This Guide includes information on;

1. Where to get the Correct Software and Manuals?
2. How to Connect and Save the Archive?
3. Procedure for Replacing a Controller
4. Upgrading Controller Firmware
5. FAQ's
  - a. What does FLS stand for?
  - b. What does Wrn RA15 Fail mean?
  - c. What does Wrn Maintenance mean?



▶ A short video has been created to briefly introduce you to configuring your controller using LiteEdit. This contains information on how to configure inputs/outputs, sensors, extension modules, and your ECU.

<https://youtu.be/yIKOnHDkBps>



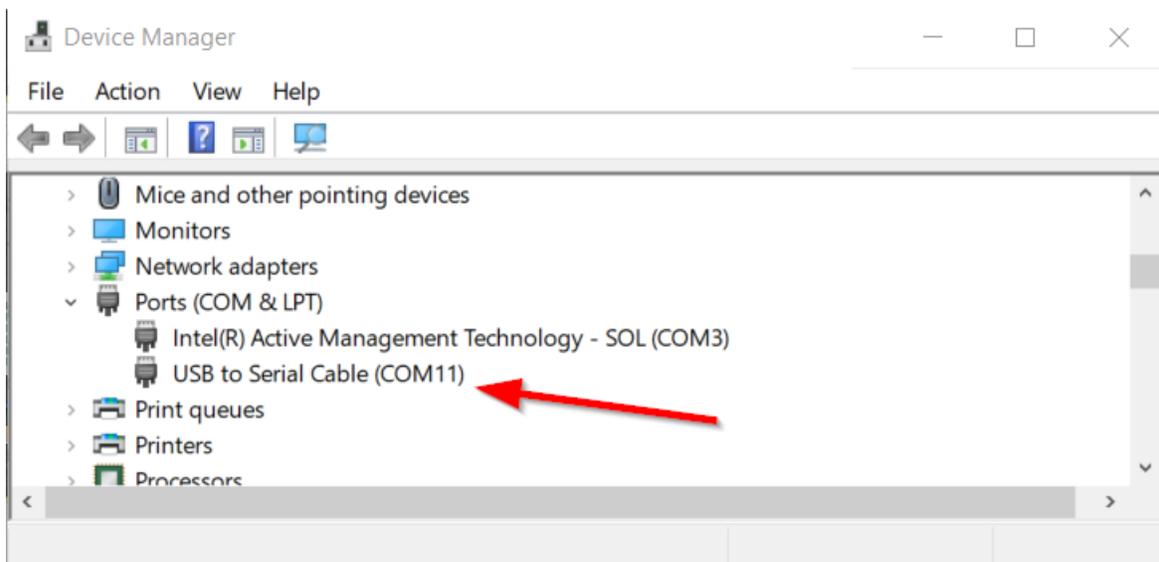
## IL-NT-MRS19 Software and Manuals

- ▶ **Step 1:** Go to <https://www.comap-control.com/products/detail/intelilite-nt-mrs-19>
  - You will need to log-in/create your ComAp Members Club account prior to downloading any software or manuals from our website. This can be done in the upper right corner of the web page.
  
- ▶ **Step 2:** Scroll down to the downloads section> Expand software> Download the InteliLite NT 2.2.0 Installation Suite.
  - This will provide you with the LiteEdit software needed to program your controller.
  
- ▶ **Step 3:** Expand manuals and download the InteliLite NT MRS 2.2 Reference Guide.
  - This is the main manual for the controller.
  
- ▶ **If Interfacing with an ECU:** Expand manuals and download the Electronic Engines Support Guide. This will help you properly establish communication with the ECU.
  
- ▶ **If setting up Modbus, Remote Connection, Internet Connection, or any other communication protocol:** Expand manuals and download the IL-NT Communication Guide. This manual will go in-depth, explaining how to properly establish various communication protocols and interfaces.



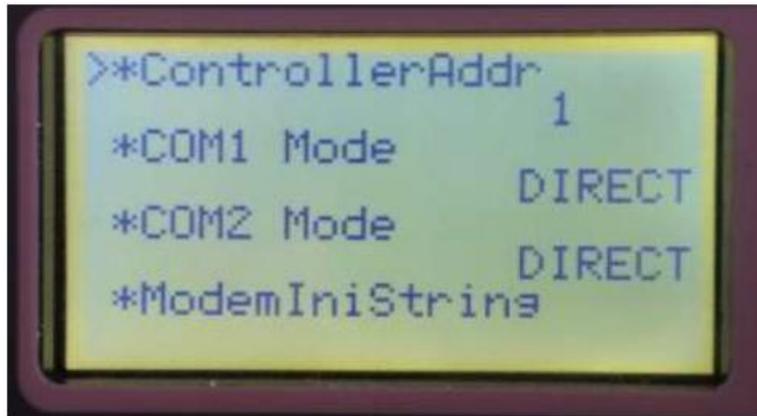
## Connecting to IL-NT-MRS19 and Saving the Archive File

- ▶ **Step 1:** You will need LiteEdit installed on your computer, along with a 9-pin serial null modem cable and USB to serial adapter to physically connect your computer to the controller.
  - If using your USB to serial adapter for the first time- Confirm the driver is correctly installed by double-clicking on the adapter shown in the picture below.
- ▶ **Step 2:** Connect your computer to the controller> Power on the controller> Open LiteEdit.
- ▶ **Step 3:** Open a Direct Connection
- ▶ **Step 4:** Select the COM port of your computer that the adapter is plugged into.
  - This can be confirmed by viewing your ports in device manager (shown below). Double-clicking on the adapter will show the device driver status.



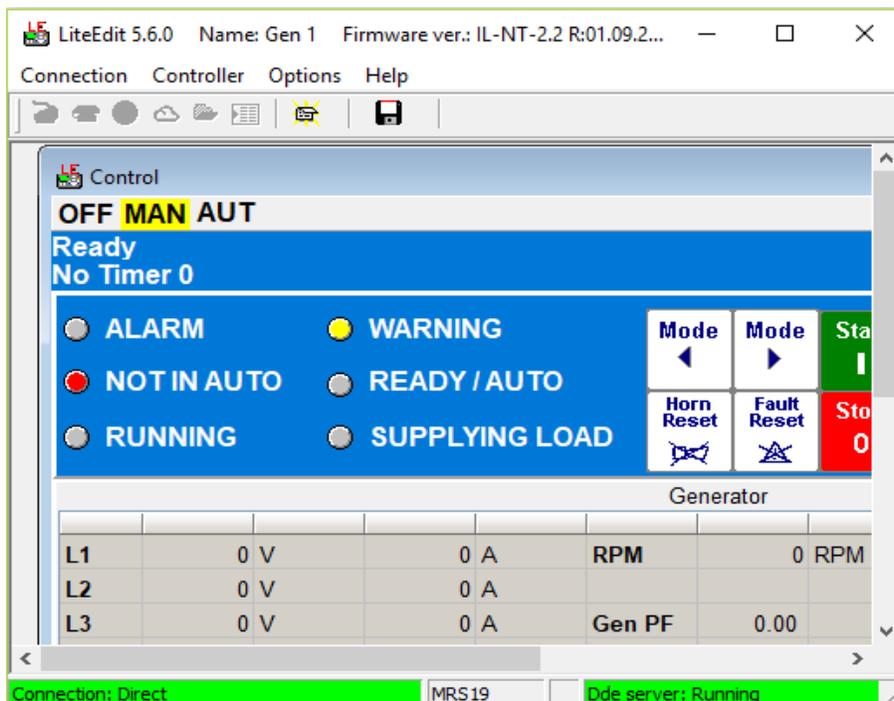
**Step 5:** Select the correct controller address and confirm COM1 mode is set to Direct.

- This can be found by pressing page> Comms Settings on the front screen of the controller. \*If you have a controller with old firmware, this will be found under basic settings.
- If COM1 mode needs to be changed, press enter and use the arrows to select direct. If there is an \* before the setpoint like shown below, the password must be entered first. This can be done by pressing page and selecting password.



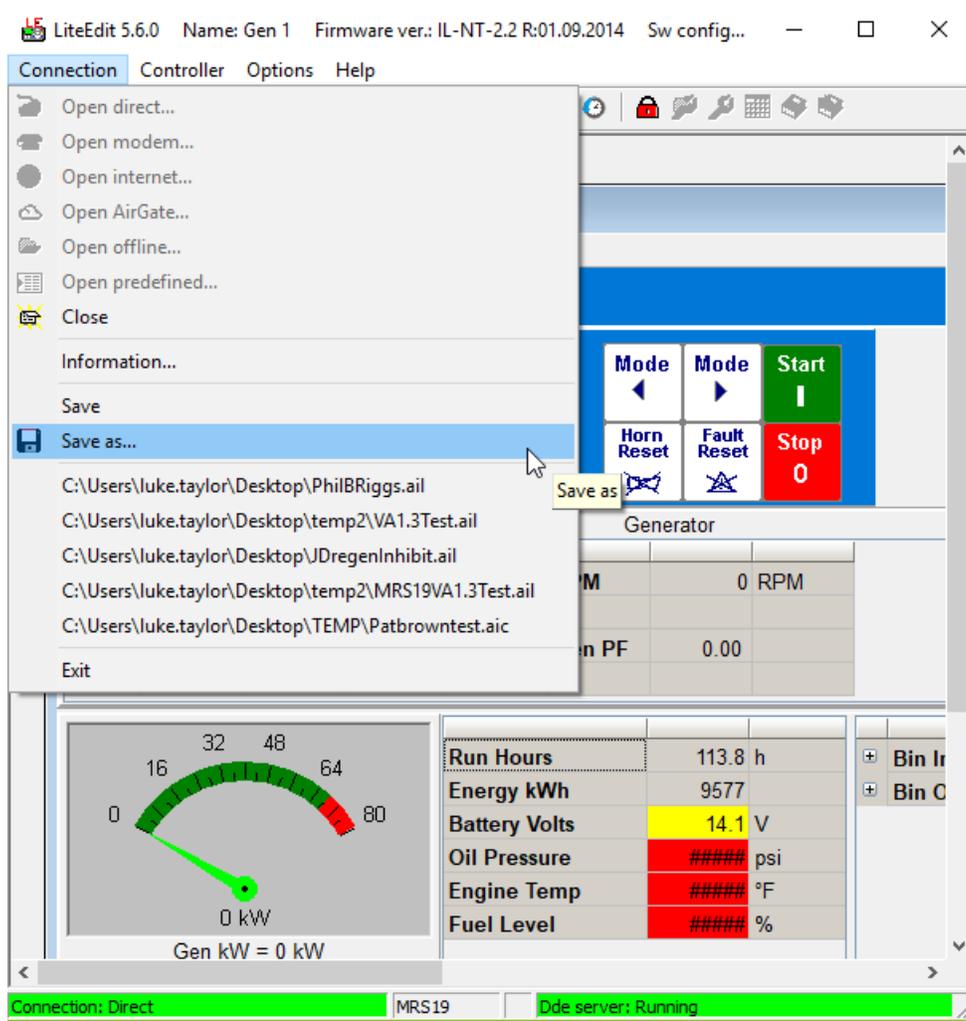
▶ **Step 6:** Confirm you are connected!

- This is done by seeing a green status bar and Dde server: Running status at the bottom of LiteEdit



▶ **Step 7: Select connection and save as.**

- Save in an easy to find location on your computer.



▶ **If you fail to connect;**

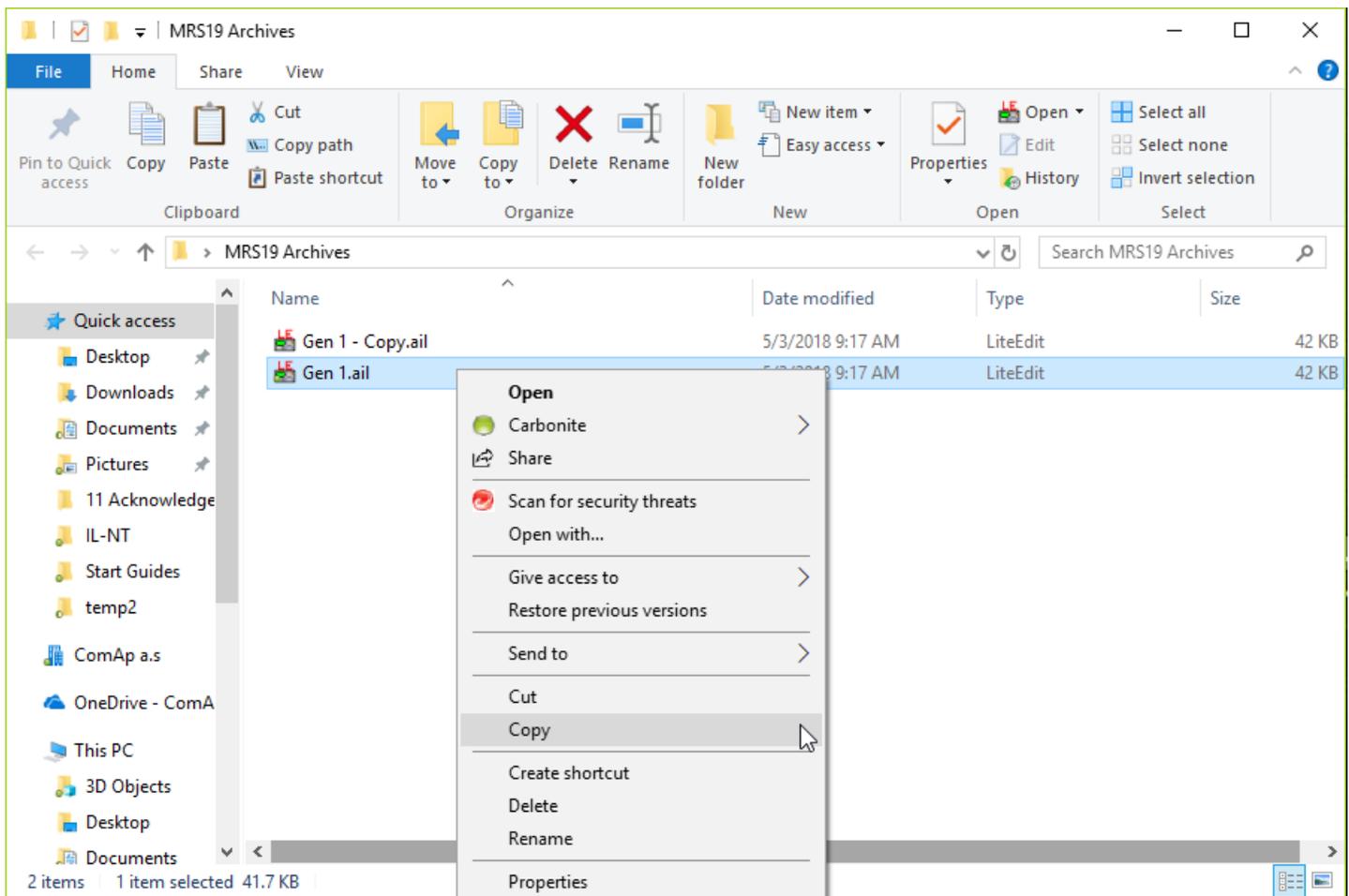
- Remove the back cover and confirm the RS232 plug-in module is correctly installed and no pins are damaged on the circuit board. \*If viewing the controller from rear, module must be on right side!
- Confirm your 9-pin serial cable is a **Null Modem**, they are not all the same! Null modem means pins 2 and 3 are swapped and not straight through. You can verify this by testing continuity if need be.
- Confirm all connects are solid and cables in good condition.



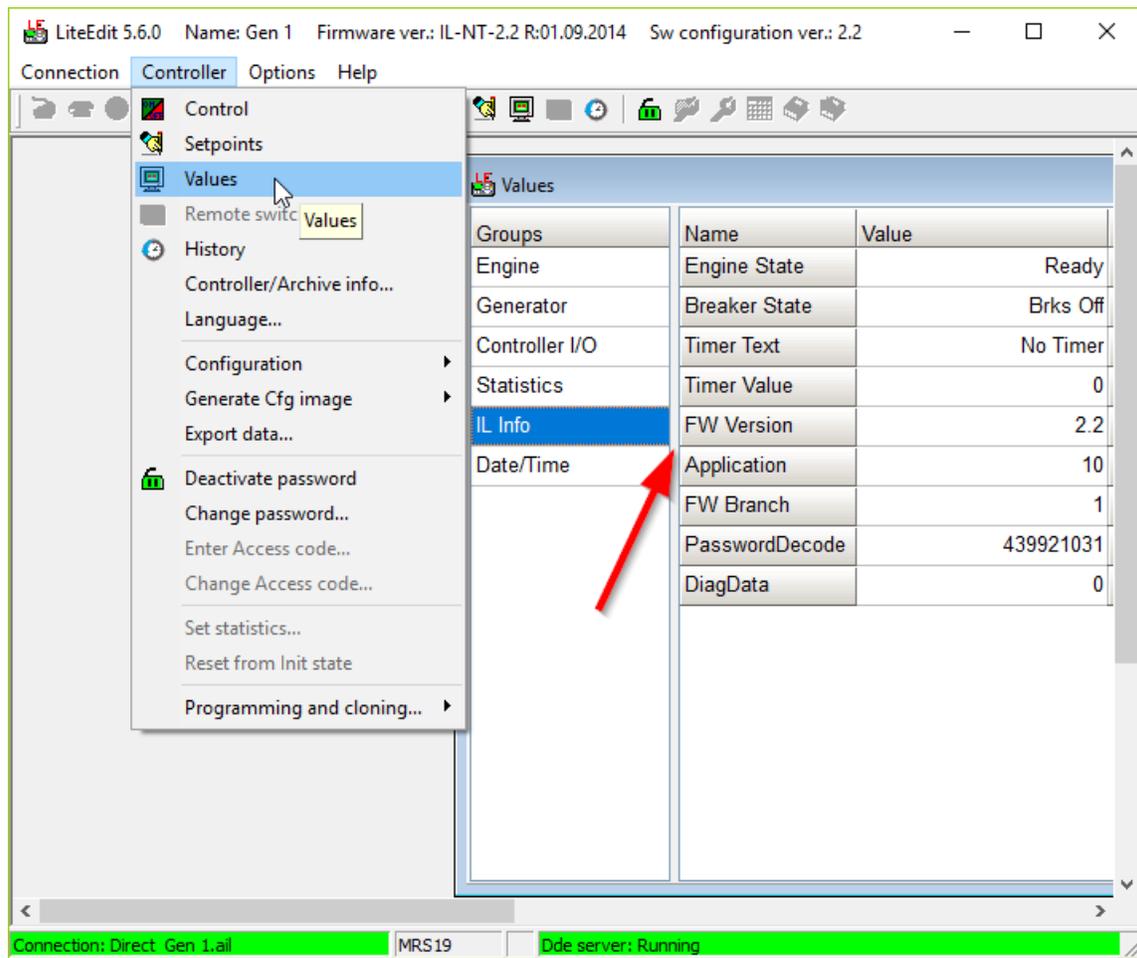
## Programming your Replacement IL-NT Controller

\*These instructions are to be used when you are replacing a controller and want to “pull” program from old controller and load it into the new one. These can also be used if you want to make a “copy” of another controller.

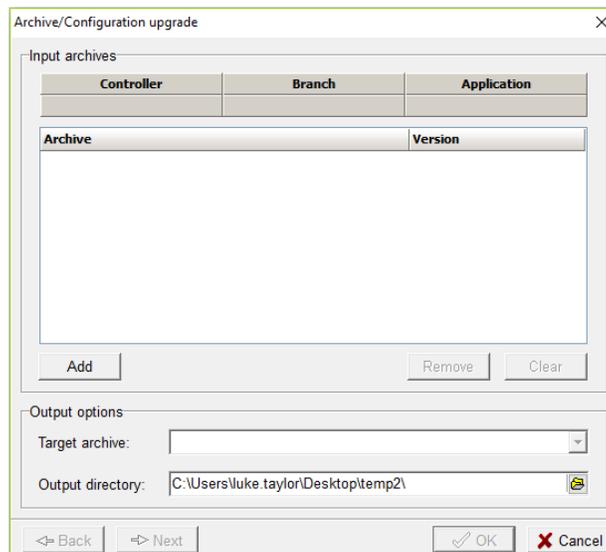
- ▶ **Step 1:** Connect to old controller and save the archive in an easy to find location.
- ▶ **Step 2:** Right-click on that saved archive> make a copy and paste it in same location. (As seen below)



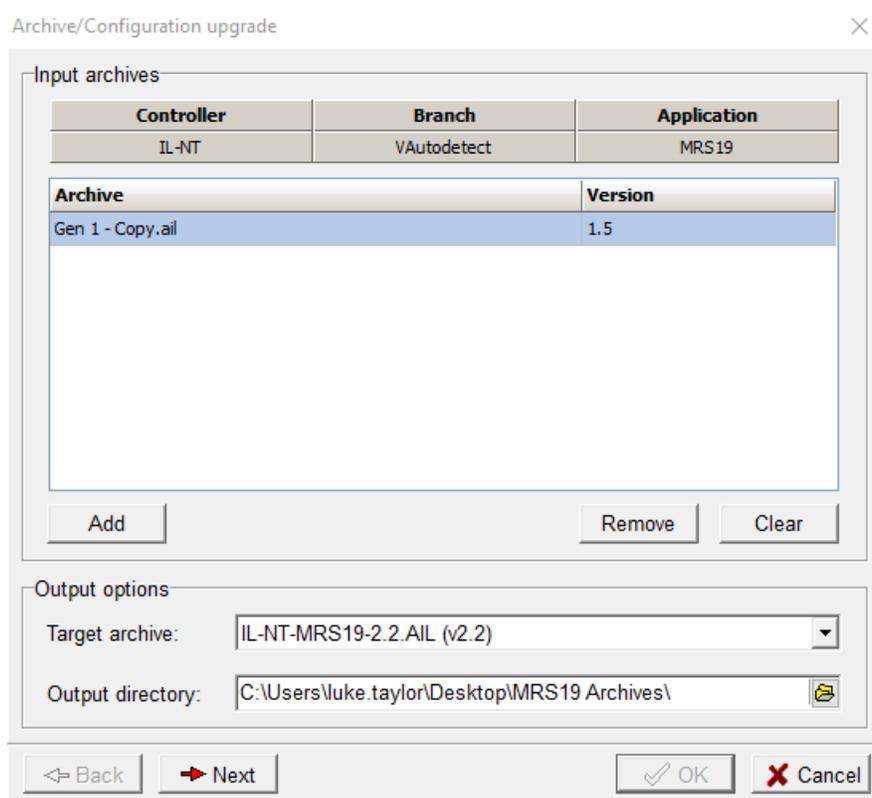
- ▶ **Step 3:** Connect to the new controller.
- ▶ **Step 4:** Select controller>values>IL info.
  - Take note of the new controller FW version. You will need this information. (Below is an example of controller with FW 2.2)



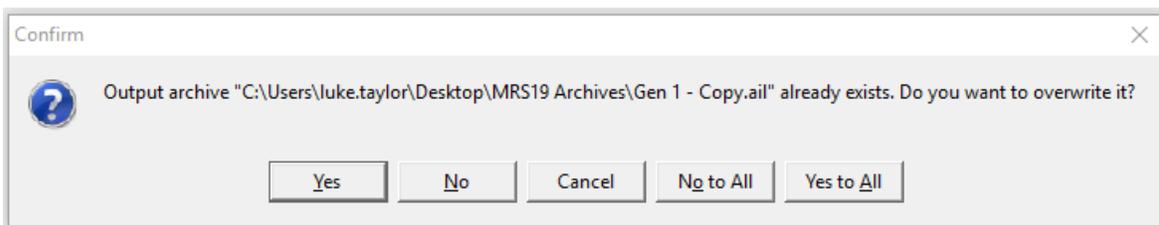
- ▶ **Step 5:** Select controller>programming and cloning>archive/configuration upgrade
  - A new window will pop up (shown below)



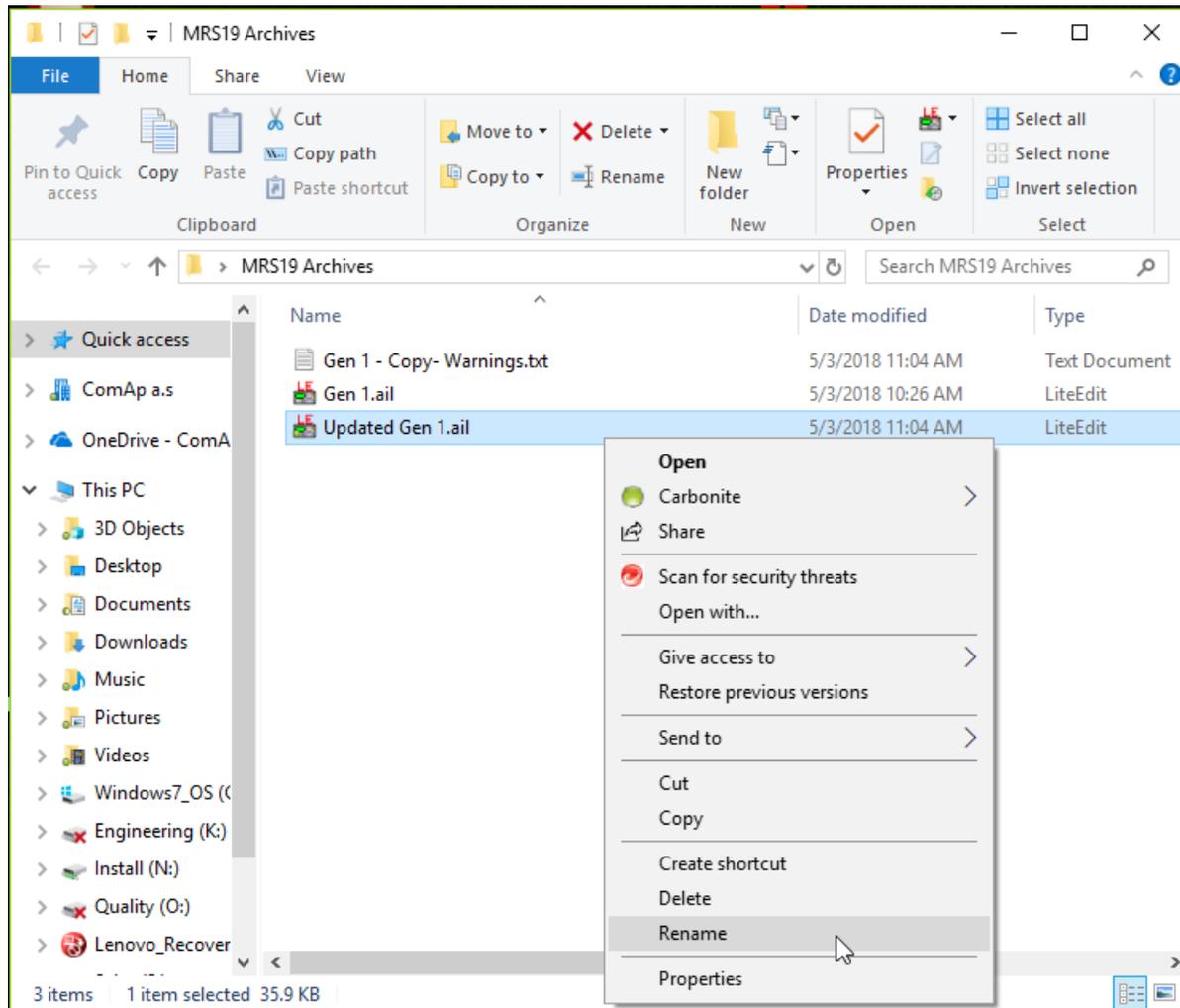
- ▶ **Step 6:** Select “Add” and choose the copy of the archive you saved from previous controller.
- ▶ **Step 7:** Expand the target archive and select the same firmware version as your new controller.
- ▶ **Step 8:** Make sure the output directory is in the same location as the copy archive. (shown below is steps 6-8 completed)



- ▶ **Step 9:** Continue to press next and when asked if you want to overwrite the existing copy archive, select “Yes to All”. (shown below)

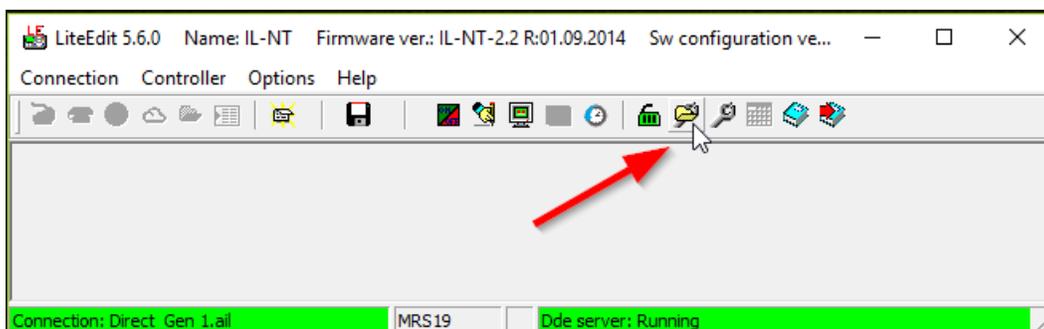


- ▶ **Step 10:** Right-click on the copy of the archive you just converted to the new firmware version and rename the file so you know it has been updated (shown below).
- You can also open this file offline to confirm the archive did indeed upgrade to the newer FW version.

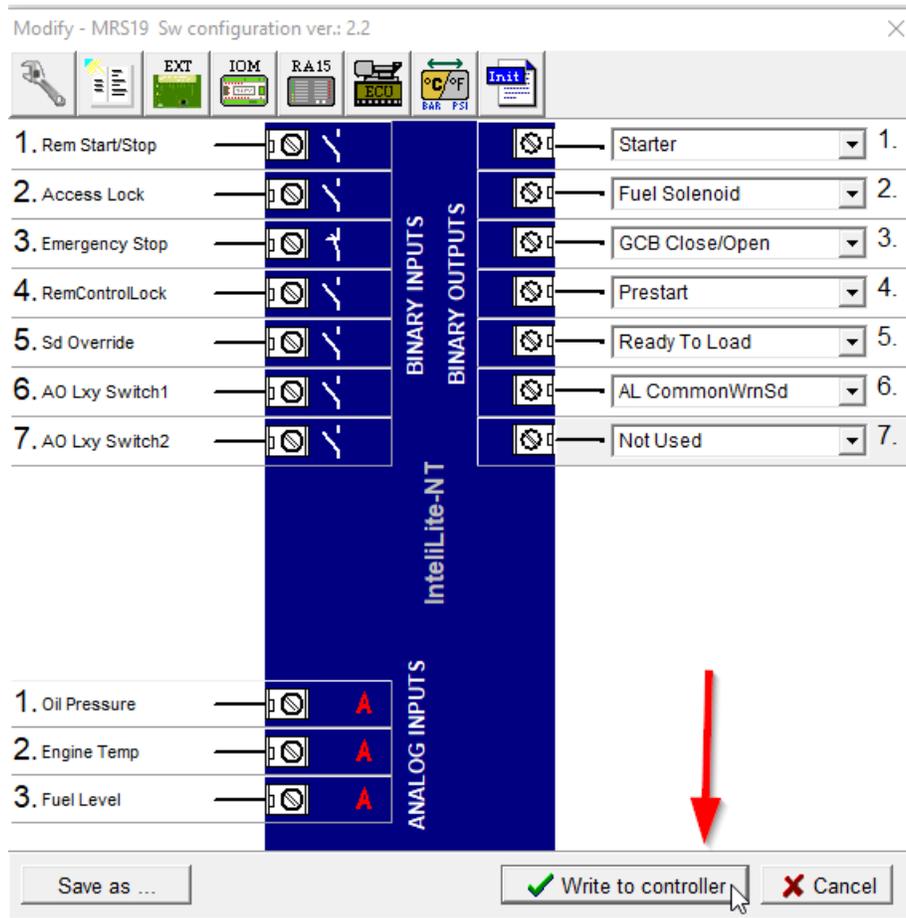


- ▶ **Step 11:** Connect to the new controller

- ▶ **Step 12:** Press the “select configuration” icon from the top task bar (shown below) and select the archive you have just updated and renamed.



- ▶ **Step 13:** You will be asked if you want to save the actual archive- this is a default archive and saving it is not necessary, so select “no”.
- ▶ **Step 14:** The configuration of the old controller will pop up, select **“Write to controller”** (shown below)
  - You will be asked if you want to overwrite setpoints by values from the selected archive, press “Yes”.



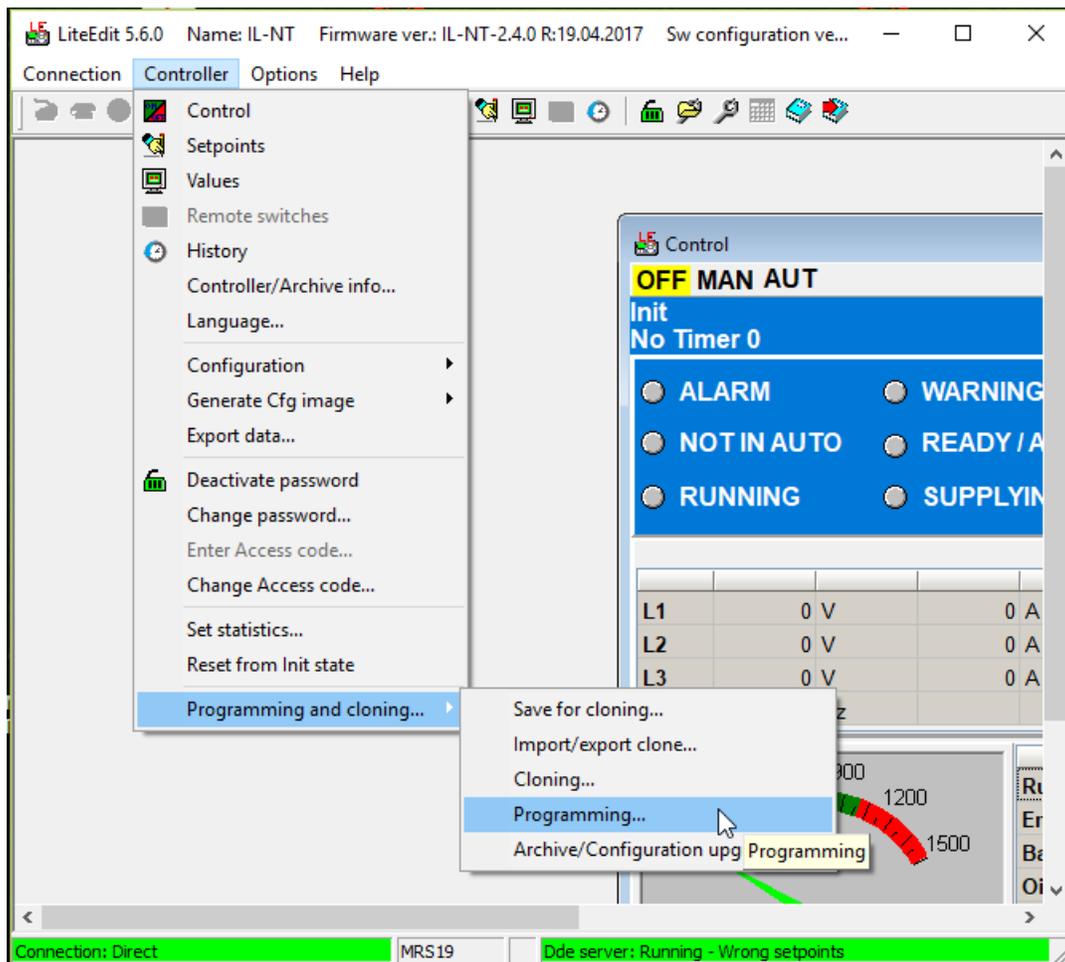
▶ **Your controller is now programmed!**

- Please take the time to verify all setpoints and configuration has transferred properly. There can sometimes be errors when a large firmware change is taking place. There can also be errors when the updated firmware version has new setpoints/features that were previously not there.

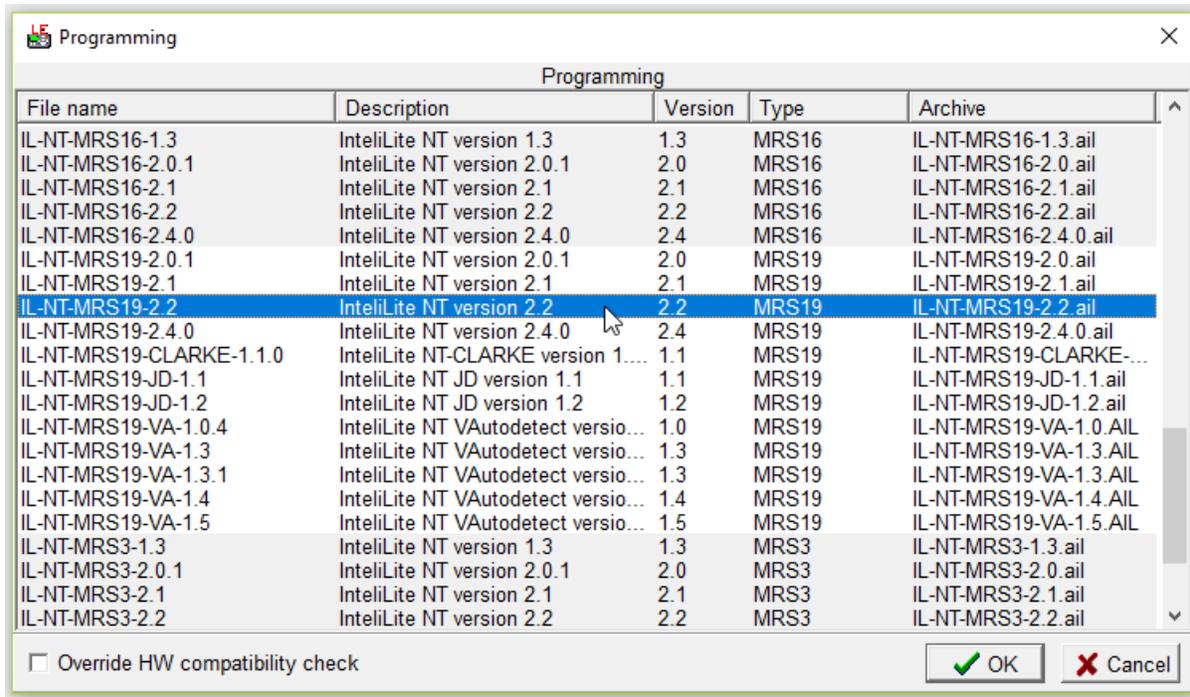


## Upgrading Controller Firmware

- ▶ **Step 1:** Connect to controller and enter your password.
- ▶ **Step 2:** Select Controller>Programming and Cloning>Programming...(shown below)



- ▶ **Step 3:** Select the firmware version you would like to upgrade the controller to. (Shown below) \*This will overwrite all the configuration, inputs/outputs, ECU, Extension modules, ect., with what is in a default archive. Make sure your existing one is saved!



- ▶ **Step 4:** You will be asked if you want to overwrite setpoints by values from the default archive. \*This is up to you. If you select no, setpoints will remain the same as currently in controller.

- ▶ **Your controller firmware has been programmed!**



## FAQ's

### ▶ A: What does FLS Stand for?

- FLS stands for a sensor fail. This means you do not have proper communication with your ECU, or that the incorrect sensor is configured. When using a wired analog sensor, you will receive a FLS alarm when the ohm reading by the controller is outside of the configured curve. Next Steps?
  - Confirm proper installation and grounding of sensor
  - Confirm analog sensor is properly configured in LiteEdit

### ▶ B: What is Wrn RA15 Fail?

- The RA15 is a remote annunciator you can install on the CAN bus and configure using LiteEdit. This warning is telling you communication has been lost with this device. Next Steps?
  - Confirm proper Can wiring and installation of the terminating resistors. More information can be found in the RA15 Reference Guide or IL-NT Communication Guide.
  - Don't have a RA15? Connect with LiteEdit>Open configuration and select the RA15 icon from the too task bar. This is where you can select the RA15 as not being connected.

### ▶ C: What does Wrn Maintenance mean?

- This means your maintenance timer has expired. This is set by the WrnMaintenance setpoint. How to reset it?
  - Either using LiteEdit or through the front panel, navigate to setpoints>engine protect>Wrn Maintenance. Whatever you set this to, that is the number of run hours that need to occur before this alarm is active again. To turn alarm off, set to 65,535.

